Los Angeles County
Emergency Medical Services Agency
Quality Improvement Plan
2017/18

I. Introduction

Los Angeles County EMS Agency Mission Statement

To ensure quality, compassionate, and timely emergency and disaster medical services

The Los Angeles County (LAC) Emergency Medical Services (EMS) Agency is responsible for monitoring and implementing regulatory oversight over for one of the largest multijurisdictional EMS systems in the nation. The LAC system utilizes more than 18,000 certified EMS personnel employed by public and private organizations, fire departments, ambulance companies, hospitals, and law enforcement agencies to provide emergency and non-emergency prehospital care to over 10 million residents and visitors.

LAC requires a comprehensive quality improvement (QI) program to provide ongoing system evaluation to maintain quality in day-to-day operations while implementing process improvement strategies to advance patient care delivery that are consistent with best practices and evidence-based medicine. The QI plan provides the written framework for the QI program.

Our system utilizes a multidisciplinary collaborative approach to drive improvement. It is educational, not punitive by design to encourage the exchange of information to enhance patient safety and minimize adverse events. Quality patient care delivery is sustained through ongoing evaluation, timely system feedback and education, in addition to, providing opportunities to acknowledge performance excellence within the system.

The EMS Agency and QI program supports the California EMS Authority (EMSA) in the development, implementation, and reporting of statewide core measures.

The LAC EMS QI plan is written in accordance with the California Code of Regulations, Title 22, Division 9, Chapter 12: *Emergency Medical Services System Quality Improvement* and is consistent with the State of California *Emergency Medical Services System Quality Improvement Program Model Guidelines* and *EMSA 166, Appendix E, EMS Core Quality Measures.*

II. Structure and Organizational Description

A. Organizational Description – **(Attachment A)**

B. QI Structure – The LAC EMS Agency QI Program utilizes an integrated process that incorporates all EMS system stakeholders to develop, implement, and support QI activities. The committees described below are the structure that supports the QI Program.

1. **EMS Agency QI Team** – The EMS QI Team is the guiding body for EMS QI Program activities. The EMS Agency QI Team meetings are convened as needed to support the QI system needs. Members include, but are not limited to, the following representatives:

   EMS Agency Medical Director
   EMS Agency Assistant Medical Director
   EMS Agency Director
   EMS Agency Assistant Director(s)
   Paramedic Training Institute Medical Director
   System EMS QI Coordinator
   Chief Prehospital Care Operations
   Chief Hospital Programs
   Data Program Manager
   Additional EMS Agency staff, when needed

   Responsibilities of the EMS Agency QI Team include the following:
   - Cooperate with EMSA in carrying out the responsibilities of the EMS QI Program in accordance with the Quality Improvement Program Model Guidelines and EMS Core Quality Measures.
   - Collaborate with EMSA in the development and implementation of statewide EMS performance indicators.
   - In collaboration with the LAC Technical Advisory Group (TAG) and EMS QI team members, develop quality indicators specific to multidisciplinary system issues.
   - Maintain and support local QI/Advisory committees to incorporate input from EMS system participants for the development, implementation, evaluation, and monitoring on local and statewide measures.
   - Facilitate and support the development of training and educational programs as they relate to action plans and other QI activities.
   - Convene and facilitate Quality Task Forces ad hoc, to assist with resolving specialty care system issues.
   - Make recommendations for the development and revision of the LAC EMS Agency policies and Treatment Protocols that are consistent with best practices and evidence-based medicine.
   - Serve as a resource to support QI among all programs and appropriate stakeholder groups.
   - Publish an annual Data Report and provide ongoing reports to the EMS community.
   - Review and update the LAC EMS QI Program as needed.

2. **LAC EMS Technical Advisory Group (TAG)** – The Los Angeles EMS TAG is a multidisciplinary team; meetings are convened ad hoc to meet system needs. Members include, but are not limited to, representative(s) from the following organizations:

   LAC EMS Agency Medical Director
   LAC EMS Assistant Medical Director
   LAC EMS Director/Assistant Director(s)
   Paramedic Training Institute Medical Director
   LAC EMS Agency Physicians Specialists
   LAC EMS System QI Coordinator
   Designated EMS Agency Staff
   Paramedic Base Hospitals/9-1-1 Receiving Hospitals
   Public Provider Agency Medical Director
   Provider Agency Nurse Educator/Paramedic Coordinator
   Paramedic Training Program Director
   EMT Training Center representative
   Ambulance Association representative
   Medical Emergency Medical Dispatch Agency
   LAC Department of Mental Health

   Ad hoc members/representatives:
   Trauma Hospital Medical Director and/or Trauma Program Manager
   Air Operations Provider Agency
   Emergency Department Approved for Pediatrics (EDAP)
   STEMI Receiving Center
   Primary Stroke/Comprehensive Stroke Center
   Sexual Assault Response Team
   Law Enforcement
   Department of Coroner
   Department of Public Health
   Rapid Emergency Digital Data Information Network (ReddiNet®)

   Responsibilities of the TAG and its members include, but are not limited to the following:

   - Collaborate with the EMS Agency QI Team in carrying out the responsibilities of the LAC EMS QI Program and EMS Core Quality Measures.
   - In collaboration with the LAC QI Team, EMS QI and Advisory Committees, recommend, develop, and evaluate indicators to facilitate ongoing systemwide monitoring, data collection, evaluation, and reporting of statewide and local system performance measures.
   - Re-evaluate, recommend, expand, and improve local EMS system indicators, as needed.
   - Recommend to the EMS QI Team chartering of Quality Task Forces when issues are identified; review reports produced by the task force.
   - Support and protect confidentiality and data integrity.
   - Recommend plans for improving the EMS QI plan.

3. **Base Hospital / 9-1-1 Provider Agency QI Committee**
Meetings are held quarterly; members include, but are not limited to:

EMS Agency Medical Director
EMS Agency Assistant Medical Director
EMS Agency Director or Assistant Director
EMS Agency System EMS QI Coordinator
Designated EMS Agency staff
Prehospital Care Coordinators from each Base Hospital
Paramedic Coordinator and /or Fire Department Nurse Educator from each 9-1-1 Provider Agency
Ad hoc members/representatives:
- Pediatric Liaison Nurse from EDAP
- Air Operations Provider Agency
- Emergency Medical Dispatch
- Private (non-911) Provider Agency QI Committee

4**. Private Non 9-1-1 Provider Agency QI Committee**
Meetings are held every four months; members include, but are not limited to:

EMS Agency Medical Director or Assistant Medical Director
EMS Agency Assistant Director
EMS Agency System QI Coordinator
Chief Prehospital Operations and other designated EMS Agency staff
Non 9-1-1 BLS/ALS/CCT provider agencies
Ad hoc members/representatives:
- Approved paramedic training programs
- Approved EMT training programs
- 9-1-1 Provider Agency
- Emergency Medical Dispatch

4.1 **Private Provider Agency Approved for 9-1-1 Transport, QI Sub-Committee**
Meetings are held every four months, directly following the Private Non-911 Provider Agency QI Committee meeting. Members include, but are not limited to:

EMS Agency Medical Director or Assistant Medical Director
EMS Agency System QI Coordinator
Chief Prehospital Operations and other designated EMS Agency staff
Paramedic/EMS QI Coordinator from each of the 9-1-1 approved private provider agencies
Ad hoc members/representatives:
- Paramedic/QI Coordinator and/or Fire Department Nurse Educator from each 911 Public Provider Agency utilizing a private provider agency approved for 911 transport

5. **Standing Field Treatment Protocol** (**SFTP) Provider Agency QI Committee**
   The utilization of SFTPs will be phased out of the system in 2018 due to the implementation of the revised Treatment Protocols to include Provider Impression. A robust QI tool has been developed to evaluate the utilization of Provider Impression systemwide **(Attachment B).**

6. **Trauma Hospital Advisory Committee (THAC) - QI Sub-Committee**
   THAC meetings are held every other month to address trauma care in LAC. For QI meeting purposes, THAC QI is divided into three sub-committees each covering a region of the county. The QI sub-committees meet quarterly and report back to THAC. Members include, but are not limited to:

   EMS Agency Medical Director
   EMS Agency Assistant Medical Director
   EMS Agency Director and/or Assistant Director(s)
   EMS Agency Trauma Program Manager and designated staff
   Trauma Medical Director (surgeon) from each designated Trauma Center
   Trauma Center Program Manager (RN) from each designated Trauma Center
   TAG members, as needed

7. **Medical Advisory Council (MAC)**
   MAC Meetings are held quarterly to assist the EMS Agency Medical Director in carrying out regulatory responsibilities, provide recommendations on written treatment guidelines, policies and procedures that are consistent with best practices and evidence-base medicine. Members include, but are not limited to:

   EMS Agency Medical Director
   EMS Agency Assistant Medical Director
   EMS Agency Director and/or Assistant Director
   Paramedic Training Institute Medical Director
   EMS Agency Physician Specialist(s)
   System EMS Agency QI Coordinator
   Designated EMS Agency staff
   Medical Directors from each Base Hospital
   Medical Directors from each Provider Agency
   Representatives:
   Trauma Hospital physician
   Association Prehospital Care Coordinator
   9-1-1- Receiving Hospital physician
   TAG members, as needed

8. **ST Elevation Myocardial Infarction (STEMI) Receiving Center (SRC)/ Return of Spontaneous Circulation (ROSC) QI Committee**
   The SRC/ROSC program QI meetings are divided into four regions. Meetings are held biannually, at a minimum, to maintain and improve program quality appropriate to the SRC system. Members include, but are limited to:

   EMS Agency Medical Director
   EMS Agency Assistant Medical Director
   Paramedic Training Institute Medical Director

EMS Agency SRC Program Manager
At minimum (1) SRC Medical Director and (1) a designated physician from two separate SRC facilities within each of the SRC regions,
9-1-1 Provider Agency Paramedic

9. **Stroke Advisory Committee**
The ASC program meetings are held every four months, at minimum to maintain and improve quality of stroke care delivery. The EMS Agency implemented Comprehensive Stroke Center (CSC) designation in early 2018. CSC hospital designation includes Thrombectomy Capable Stroke Centers (TSC). Members include, but are not limited to:

EMS Agency Medical Director
EMS Agency Assistant Medical Director
EMS Agency Physician Specialist
EMS Agency Stroke Program Coordinator
EMS Agency Staff
Medical Directors from each PSC/CSC/TSC
Stroke Coordinators from each PSC/CSC/TSC

9.1 **Stroke Data QI Collaborative Committee**
This committee is in the beginning stages of development. The primary purpose is to assist the EMS Agency in evaluation of the stroke data, provide recommendations and develop future quality initiatives to improve delivery of stroke care within the system. Members include, but are not limited to:

EMS Agency Medical Director
EMS Agency Assistant Medical Director
EMS Agency Physician Specialist
EMS Agency Stroke Program Coordinator
EMS Agency Staff
Designated PSC, CSC, and TSC representatives

10. **Pediatric Advisory Committee (PedAC)**
The PedAC meets quarterly to provide expert oversight and address QI needs specific to pediatric patients. Members include, but are not limited to:

EMS Agency Medical Director
EMS Agency Assistant Medical Director
Paramedic Training Institute Medical Director
EMS Agency Pediatric Physician Specialist
EMS Agency Assistant Director
EMS Agency EDAP Program Manager
Designated EMS Agency staff
Pediatric Liaison Nurse from each EDAP region
Medical Director of EDAP from each EDAP region
Medical Director, Director, and Coordinator from a Pediatric Medical Center
Medical Director and a Program Manager from a Pediatric Trauma Center

11. **EMS Commission Advisory Committees**
Meetings of the advisory committees are held every other month. Each advisory committee's membership represents the constituent groups as outlined in the EMS Commission bylaws. The EMS Commission Advisory Committees include the following:

Base Hospital Advisory Committee (BHAC)
Provider Agency Advisory Committee (PAAC)
Data Advisory Committee (DAC),
Education Advisory Committee (EAC)

III. Data Management

A. Data Collection

The EMS Agency obtains information through a variety of methods that include the following sources: electronic data exchange, hard copy review, internal and external customer surveys, and program reviews (audits). Data collection is primarily conducted via the Trauma and Emergency Medicine Information System (TEMIS), Lancet Technology, Inc. The TEMIS database was implemented to assist the EMS Agency in evaluating, monitoring, and coordinating all EMS components, as well as meet State data collection requirements.

The transition to electronic patient care record (ePCR) will be complete in 2018 for all public 911 provider agencies. Exclusive Operating Area private provider agencies, paramedic base hospitals and trauma centers utilizing paper patient care records (PCR) capture the required data elements using an approved electronic platform, and standard paper forms (EMS Report Form, Base Hospital Form and Trauma Patient Summary Form). All paramedic base hospitals and trauma centers conduct data entry on site. The data is uploaded automatically to a dedicated File Transfer Protocol (FTP) site every 24 hours.

Other mechanisms by which the EMS Agency obtains data include direct data input to the LA STEMI and LA Stroke databases by the designated SRC, PSC, and CSC hospitals. Stroke data is also downloaded from the *Get With The Guidelines (GWTG)* Patient Management Tool. Helicopter EMS (HEMS) data is submitted to the EMS Agency on a monthly basis from the three HEMS providers in LA County. The EMS Agency is in the process of incorporating STEMI, Stroke and HEMS data into TEMIS. Systemwide data collection on hospital diversion, bed availability, and surge capacity are collected via ReddiNet.

B. Data Validation

Data submitted to TEMIS undergoes an extensive data quality review and clean up through the following mechanisms:

1. EMS Agency data entry personnel conduct monthly peer review data audits. Identified errors are corrected and overall data entry performance

is included in the data entry personnel's periodic performance evaluation report.

2. EMS Provider Agencies utilizing electronic data collection are required to validate their data using the EMS Agency's published EMS Data Validator before submission to the FTP site. The EMS Agency conducts a secondary validation before final upload to TEMIS. Data that fails validation is rejected and sent back to the EMS Provider for correction.

3. Annual data audits are conducted by the EMS Agency for each EMS Provider Agency. A corrective action plan is required for data elements that fall below a 90% compliance rate for accuracy and completeness.

4. Data clean up reports are generated by the EMS Agency on a quarterly basis for Paramedic Base Hospitals and Trauma Centers. In general, a corrective action plan is required for data elements that fall below a 90% compliance rate for accuracy and completeness.

5. Documentation reports are routinely developed and disseminated in the quality improvement committees for evaluation and education on the application of the data dictionary and data standards to improve reliability.

C. **Data Submission**

1. The EMS Agency ensures timely data collection and submission from base and trauma hospitals through written agreements.

2. Data collection requirements for other specialty care centers are prescribed in the specific specialty care center Standards and/or local policies.

3. EMS provider agency data collection requirements are governed by local policies. Submission of required data to the EMS Agency is highly dependent upon organizational resources (method of data collection/ ePCR vendor) and size (personnel/volume of EMS responses). The EMS Agency has established policies and procedures specific to submission of electronic patient care data. However, provider agencies continue to experience vendor-related problems that cause significant delays in data submission to the EMS Agency. The EMS Agency and EMS community continue to work together on improving data collection and submission as the system transitions to the new CEMSIS (NEMSIS) data requirements.

4. The LA County Trauma Center Program recently began participation in the American College of Surgeons Trauma Quality Improvement Program (TQIP). Effective January 2018, all trauma centers have completed the required training and implemented the TQIP data dictionary.

5. EMS providers may be required to submit self-reported data utilizing Excel spreadsheets for the following reasons:

    a. Non-911 (interfacility) transports are not entered into TEMIS.

    b. Base hospitals and public 911 provider agencies may be required to submit data prior to revision of the TEMIS data dictionary.

    c. Provider agencies approved for a pilot project with an expanded local scope of practice requiring data not captured in the EMS Agency databases.

D. Data Utilization

1. The EMS Agency utilizes the TEMIS, LA STEMI, LA Stroke, and GWTG databases for both statewide core measures and local system reports. The local reports are utilized for daily operations such as performance and contract monitoring, system audits, policy revision, and QI activities. The databases are also used to provide the information needed to analyze the potential impact of hospital diversions and closures.

2. Self-reported data utilizing Excel spreadsheets are utilized for purposes of evaluating performance and ensuring safety when new medications, treatment and/or devices are implemented into the system.

E. Limitations

1. Separate Databases: The existence of multiple databases is not ideal for timely reporting. Multiple data entry and data abstraction are conducted on the same patient. Data analysis is resource-intensive when data elements are found in the various databases.

2. Multiple System Participants: Data validation and transmission is complex as more EMS provider agencies move toward utilizing various electronic patient care reporting software applications. Changes to the reporting standards often require additional time and expense.

3. Data Quality: Current methods of data capture require extensive data Audits. Cleanup is needed to ensure valid and reliable data.

4. Data Use Agreement (DUA): Meaningful evaluation of system performance is highly dependent on the collaboration amongst the participants, consensus on how data will be collected and utilized. Currently, the EMS Agency is only able to share a limited dataset with the EMS Authority without a DUA in place. A DUA would allow for an open and full exchange of data that can be used to expand evaluation of system performance and improve delivery of care.

IV. Quality Indicators

A. Provider Impression
The EMS Agency will be implementing the utilization of Provider Impression codes systemwide in 2018 -19 along with a robust quality improvement process to include, a new Medical Control Guideline, Reference No. 1373, Treatment Protocol Quality Improvement Fallout Data Dictionary to assist the EMS community **(Attachment C).**

B. Ambulance Patient Offload Time (APOT)
The EMS Agency continues to work with the system participants to collect data using the Standardize Methods for Collecting and Reporting APOT data adopted by the EMS Authority. A workgroup has been convened to assist the EMS Agency in policy development to provide guidance in reducing 911 patient offload time. Members include representatives from the following organizations: Hospital Association of Southern California, Los Angeles County Ambulance Association, Emergency Nurses Association, Los Angeles County Professional Fire Fighter's union, public (9-1-1) and private (non-911) provider agencies, and base hospitals.

C. EMSA Core Quality Measures
The EMS Agency historically has participated in statewide data submission to CEMSIS. As EMSA transitions over to the NEMSIS data dictionary, the EMS Agency will continue to actively participate in statewide data collection through the submission of core measure data outlined in EMSA #166, Appendix E, EMS Quality Improvement Program Guidelines/Core Quality Measures. To ensure reliable and valid data, the EMS Agency will continue to update our data dictionary and provide training/feedback to EMS personnel on documentation of the core measure data elements with the exception of ambulance response times by zones. The LAC EMS system is not designed to collect data by zones*. Alternatively, systemwide ambulance response times are reported and collected. The EMS Agency continues to collaborate with the 9-1-1 receiving hospitals to obtain cardiac arrest patient outcome. Current Core Measure Report **(Attachment C)**.

D. Local Performance Indicators

Category	Reporting Frequency	Indicator Summary	Method of Collection	EMS Agency Section Responsible
Personnel	**Annually**	**Number of Emergency Medical Technician certifications that result in disciplinary action – ongoing tracking for variance**	**EMS Agency Prehospital Emergency Personnel System Information (PEPSI) Records**	**Certification and Program Approvals**
Equipment	**Quarterly**	**Percentage of pts transported on a backboard when SMR is utilized**	**TEMIS – EMS Database**	**System QI**
Documentation	**Quarterly**	**Number of public provider agencies compliant with documentation of mandatory data fields** **(Attachment D)**	**TEMIS**	**Prehospital Care Programs**
Documentation	**Quarterly**	**Number of base hospitals compliant with documentation of mandatory data field** **(Attachment E)**	**TEMIS**	**Hospital Programs**
Documentation	**Quarterly**	**Percentage of EMS PCR with Provider Impression = Stroke/TIA with mLAPSS + and LAMS**	**TEMIS**	**System QI**

Category	Reporting Frequency	Indicator Summary	Method of Collection	EMS Agency Section Responsible
Clinical Care and Patient Outcomes	**Quarterly**	**90 percentile for time from STEMI Referral Center door to PCI at the SRC for STEMI-identified patients < 120 min**	**STEMI Database**	**SRC/ROSC Program**
	Quarterly	**Percent of pts with Provider Impression = Agitated Delirium receiving midazolam**	**TEMIS Base**	**System QI**
Skills Competency	**Quarterly**	**Number attempts and successful placement for ETT and King-LTSD**	**TEMIS**	**System QI**
Transportation/ Facilities	**Annually**	**Trauma Center volume systemwide**	**TEMIS**	**Trauma Program**
	Annually	**Volume of patients transported by 9-1-1 from acute care hospitals, by chief complaint**	**TEMIS**	**Hospital Programs**
Public Education and Prevention	**Quarterly**	**Percentage of cardiac arrest 9-1-1 responses that receive bystander CPR**	**TEMIS**	**Prehospital Care Programs**
	Annually	**Number of citizens trained in "hands-only" on SideWalk CPR**	**Self-reported utilizing a standardize report form**	
Risk Management	**Quarterly**	**Percentage of non-transported pts left on scene w/o AMA**	**TEMIS**	**System QI**

V. Prehospital Research

Research provides an evidence base to support prehospital medical treatments and interventions. The EMS Agency, in collaboration with community partners collect data using research methods for purposes of local system improvement and when possible, for publication in the EMS and disaster literature.

VI. Evaluation of System Indicators

A. The System EMS QI Coordinator and designated staff prepare reports on system performance indicators to be utilized by the QI Team, TAG, Advisory Committees, and EMS Commission to ensure systemwide evaluation.

B. Under the direction of the EMS Agency Medical Director, the EMS Agency QI Team will analyze system reports generated by each EMS Agency section responsible for reporting on current local performance indicators and State core measures.

C. Presentations on performance indicators will be prepared in the most appropriate format to allow for ease of interpretation of data. Formats most commonly utilized include line charts, bar graphs, and flowcharts.

VII. Action to Improve

A. The EMS Agency, under the direction of the Los Angeles County Department of Health Services, utilizes the FOCUS PDSA model for performance improvement. Below is a diagram of this process and a brief description of the steps involved.

1. **F**ind a process to improve; improvement needs are identified by the EMS Agency QI Team in collaboration with the TAG, QI and Advisory groups.
2. **O**rganize the process utilizing the team most familiar with the process related to the system process identified.
3. **C**larify current knowledge of the process by collecting information and reviewing current trends.
4. **U**nderstand capabilities and causes for variations in processes by utilizing brainstorming techniques and fishbone diagrams or flowcharts.
5. **S**elect a strategy or process for improvement that will most likely reduce or eliminate the causes for variation in performance.
6. **P**lan, determine objectives and develop plan in agreement with system participants.
7. **D**o, carry out the action according to established plan.

8. **S**tudy findings, the EMS QI Team with system input will analyze the findings, compare with hypothesis, and prepare a summary for trend report.
9. **A**ct on findings, the EMS QI Team in collaboration with the TAG, QI and Advisory groups will determine performance improvement needs. A Quality Task Force may be chartered if needed, to carry out specific performance improvement plans.

VIII. Training and Education

A. The effectiveness of the QI process is related to the efficacy of training and educational activities. Due the size and complexity of our system, training and education is accomplished through a variety of mechanisms:

1. **Quality Improvement Committees/Advisory Meetings**
   Information needed for improving local system and statewide performance is disseminated to committee members for training and education of providers responsible for direct patient care.

2. **EMS Update**
   The EMS QI Team, TAG, and Paramedic Training Institute (PTI) with system input, develops and implements the mandatory annual EMS Update that address educational and training needs related to performance improvement.

3. **EMS Agency Newsletter/Updates from the Medical Director**
   The EmergiPress and Updates from the Medical Director are accessible on the EMS Agency website and is utilized to reinforce pertinent patient care information and communicate to EMS personnel and system stakeholders on systemwide issues.

4. **EMS Data Report**
   The EMS Agency publishes an annual data report that provides valuable feedback to the EMS community and citizens of Los Angeles on system demographics and performance **(Attachment F).** Link to past reports: http://dhs.lacounty.gov/wps/portal/dhs/ems/resources/reports

B. The EMS Agency QI Team, TAG, QI and other advisory groups review policies and procedures to insure consistency with the EMSA and LAC EMS QI plan.

C. Once a performance improvement plan has been successfully implemented, the EMS Agency will post all policies and system updates to its website to allow timely access by all EMS participants.

VIII. Update/Summary

The QI plan update and summary is a written account of the progress of LAC EMS Agency's QI local performance indicators. The System EMS QI Coordinator, in conjunction with the EMS Agency QI Team will prepare the written summary. The QI plan and summary is submitted to EMSA for review and published on the EMS Agency

website for review by the EMS participants and system stakeholders. Summary as follows:

Indicators Monitored	Findings/Issues Identified	Action Needed	Responsible Entity
Percentage of Emergency Medical Technician certifications that result in disciplinary action	Indicator revised to track number of EMT certifications that result in disciplinary action annually. See LAC EMS Plan for report.	Continue to monitor for variance	Office of Certification and Accreditation
Percentage of medical cardiac arrest patients receiving bag-mask ventilation and waveform capnography	Sustained improvement in the utilization of WF capnography **(Attachment G)** Will begin utilizing self-reported data (Excel spreadsheets) from LACoFD & LAFD to allow for data collection during ePCR vendor related transmission issues.	TEMIS database	System QI
Public 911 provider agencies, % of compliant with documentation of mandatory data fields	In addition to the mandatory fields, the EMS Agency is continuing to work with the provider agencies on core measure data documentation through ongoing programs reviews. Provider agencies are actively working with their vendors to improve documentation and solve data transmission issues **(Attachment G).** Moving to Provider Impression with new data requirements in 2018 **(Attachment B).**	Continue monitor and provide feedback to the EMS public provider agencies	Prehospital Care Programs
90 percentile for time from STEMI Referral Center door to PCI at the SRC for STEMI-identified patients ≤ 90 min	Performance indicator was revised to track percentage of STEMI Referral Facility (SRF) Door-to-Balloon (D2B) Time </= 90 minutes (see **Attachment F**).	Continue to monitor and provide feedback	SRC/ROSC Program
Percentage of 12-Lead ECGs that are poor quality resulting in a false positive for STEMI	The EMS Agency is actively working with the SRC Advisory Committees and EMS participants to improve the rate of discordant ECGs. A workgroup has been convened to evaluate and improve ECG transmission (see **Attachment F**).	Continue to monitor and provide feedback	SRC/ROSC Program

Indicators Monitored	Findings/Issues Identified	Action Needed	Responsible Entity
Volume of patients transported by 911 from acute care hospitals, by chief complaint	See **Attachment F** for report.	Continue to monitor for surveillance	Hospital Programs
Percentage of cardiac arrest 9-1-1 responses that receive bystander CPR	The EMS Agency organizes and delivers SideWalk CPR, an annual campaign to improve public awareness regarding Hands-only CPR during National CPR and AED Awareness Week. System data not available to due provider agency vendor issues.	Continue to monitor and provide feedback to the EMS and hospital community	Prehospital Care Programs
Number of patient safety events entered in the Safety Intelligence system (LAC reporting system)	SI Intelligence reporting system is used to capture and respond to adverse events for patients transported non-911 to County hospitals and/or by County Transportation. Patient care events are submitted to the PSO.	Continue to monitor internally. Will move to new systemwide metric.	System QI